R2520-24.000-10-1010-TR-NS4

SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	24.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±10 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±10 ppm max
OPERATING TEMPERATURE RANGE	-10°C to +60°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±2 ppm per year max
LOAD CAPACITANCE	10 pF
EQUIVALENT SERIES RESISTANCE	60 Ω max ⇦
SHUNT CAPACITANCE	3.5 pF max
DRIVE LEVEL	200 µW max ⇦
SHOCK RESISTANCE	±5 ppm max 75 cm drop test onto a hard wood surface
REFLOW CONDITIONS	260°C for 10 sec max

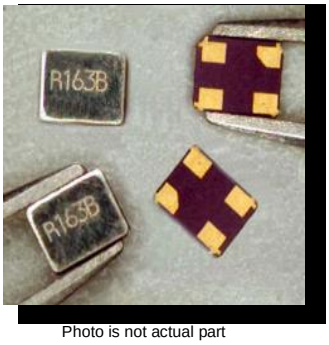
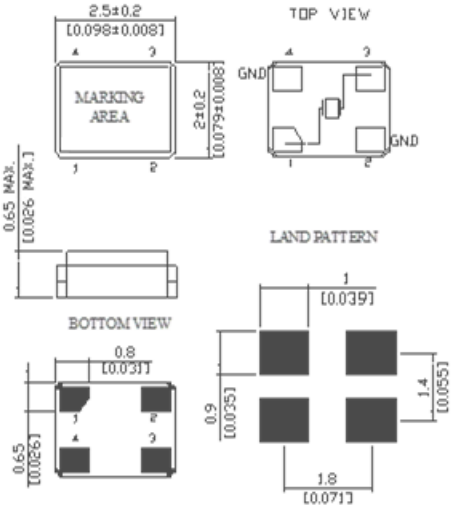


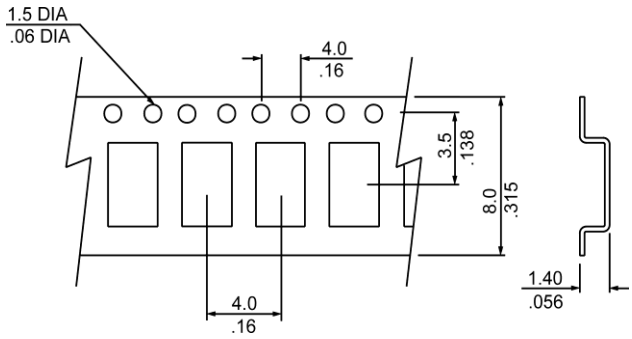
Photo is not actual part

MECHANICAL SPECIFICATION



Note: According to ceramic base availability the Chamfer location could be on a different pin. However, the Chamfer's location does not influence the electrical performance of the crystal.

CARRIER TAPE DIMENSIONS



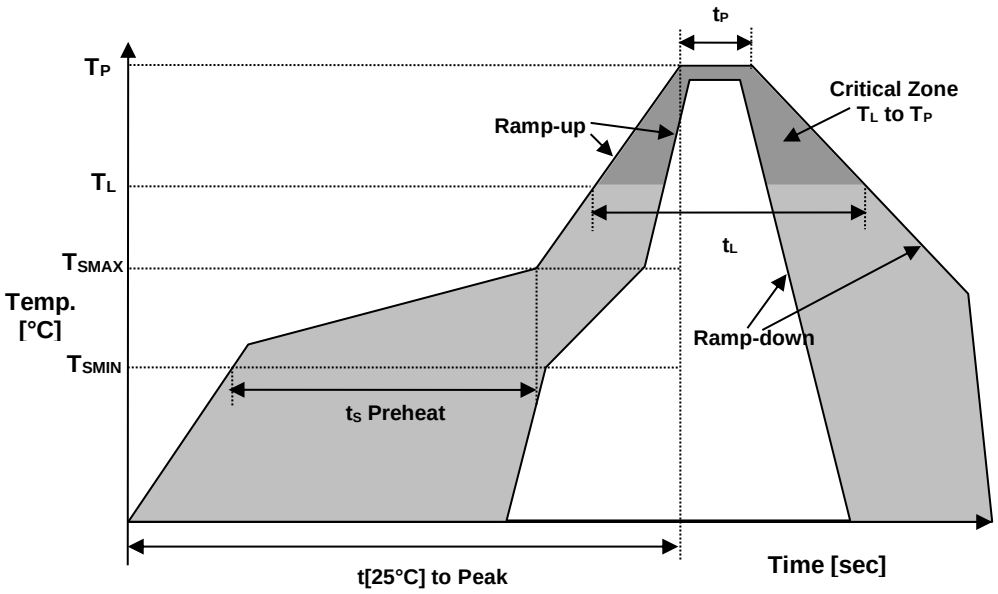
NOTE: REFER TO EIA-481 FOR DIMENSIONS

- **PACKAGING**

  178 mm REEL DIAMETER
  8 mm TAPE WIDTH, 4 mm PITCH
  QUANTITY: 3000 PIECES PER REEL

  IN ACCORDANCE WITH EIA-481

REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_S	60-180 sec
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max
Ramp-down rate	R_{DOWN}	6°C/sec max
Time within 5°C of Peak Temperature	t_P	10 sec
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec
Time	t_L	60-150 sec

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au

• MARKING

R24.000
xxKEyw

xx – Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	Code
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5
2026	6
2027	7
2029	8
2029	9

ALPHA WEEK CODE TABLE					
Week	Code	Week	Code	Week	Code
1	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

• APPROVAL

DRAWN BY	KJackson, April 4, 2018
APPROVED BY	JIvens, April 4, 2018
REVISION	A, Initial Release B, Updated to current spec levels by XS, February 17, 2021

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